

THICK GATE OXIDE TRANSISTOR AND ELECTROSTATIC DISCHARGE  
PROTECTION UTILIZING THICK GATE OXIDE TRANSISTORS

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ABSTRACT

An electrostatic discharge (ESD) protection circuit that includes an transistor with a gate electrode isolated from the semiconductor substrate. The transistor can be an insulated gate bipolar transistor (IGBT) connected between an integrated circuit (IC) pad and ground. The IGBT includes a parasitic thyristor that latches when the voltage at the pad exceeds a threshold level and does not turn off until the charge at the pad is dissipated, thereby preventing electrostatic damage to the IC.